REMARKS

Claims 11-18, 21 and 22 have been canceled without prejudice. Claim 3 and claims dependent thereon have been amended to incorporate limitations in claim 2.

Reconsideration of the rejection of claims 2-10 is respectfully requested in light of the following authorities, remarks and accompanying declaration. The declaration was not earlier presented because much of the sales data being submitted was not available and it was thought that the reasoning and authorities set forth in the response filed 15 March 2005 supported patentability of the invention over the references. Such cancellations of and amendments to claims are only for the purpose of expediting the prosecution of the application and placing the application in better form for appeal and are not to be construed as an abandonment of any of the novel concepts disclosed therein.

The office action states:

> 1. Applicant's arguments filed 15 March 2005 have been fully considered but they are not persuasive.
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> Regarding claims 2-9, 11-18, 21, and 22, applicants argue on page 9 of 12, "Nothing in the references suggests the desirability of combining what is there disclosed to meet the terms of the rejected claims." This is not persuasive as Edgar clearly teaches that smaller speaker size is advantageous for producing better phase linearity and a smoother frequency response (Col. 4, lines 21-37).
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> Regarding Claim 10, applicants argue, page 10 of 12, that the tertiary reference does not suggest the system of claim 2 constructed and arranged to transduce acoustical energy substantially at least seven watts of electrical energy per square inch of radiating surface. This is not persuasive as Humphrey discloses a commonly designed amplifier producing 100 watts per channel (Col. 2, lines 20-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a common amplifier as disclosed by Humphrey to drive a speaker system.
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> 2. The following rejection stands as previously stated.
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> 4. Claims 2-9, 11-18, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferren (US Patent 5,802,190) in view of Edgar (US Patent 5,588,063).
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> Regarding Claim 2, Ferren discloses a loudspeaker system, comprising: a first loudspeaker array comprising an enclosure having a width and a height and at least six acoustic drivers having radiating surfaces (Ferren discloses an embodiment with more than 6 speakers) (Figure 2; Column 5, lines 35-37), wherein drivers are positioned in the enclosure in a first substantially straight line, substantially regularly spaced so that the edges of radiating surfaces are less than

two inches apart (Ferren discloses separation being 1/2 inch) (Column 5, lines 37-39) , and array is constructed and arranged to radiate sound in a predetermined frequency range (Ferren discloses the full frequency range being coupled) (Column 2, lines 10-13). Ferren does not disclose the drivers having a diameter less than three inches or a predetermined frequency range of at least six octaves.

It is well known in the art that the frequency response of the human ear is approximately 20Hz to 20KHz which is approximately 10 octaves. To produce the highest quality audio response to the ear, one skilled in the art would have known that the transducers should produce a frequency range output encompassing the greatest range between 20Hz to 20KHz possible. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that a loudspeaker array would have a frequency range of at least six octaves in order to produce a high quality perceived sound for the listener.

Edgar also discloses a speaker (Fig. 5A) comprising at least six drivers in a linear array. Edgar further discloses an array of ten one-inch speakers may be used in a cabinet of 11 inches (Col. 6, lines 22-33) which will inherently produce spacing less than two inches apart. Edgar further discloses there are several reasons why a small speaker size is advantageous including producing better phase linearity and smoother frequency response (Col. 4, lines 21-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use speakers less than three inches in diameter to produce better phase linearity and smoother frequency response as taught by Edgar.

Regarding claim 8, Ferren further discloses an electrical circuit which provides essentially the same audio signal to all of said acoustical drivers at all frequencies (Ferren discloses circuit in Figure 11 which discloses substantially the same audio signal to all of the drivers (26).

Regarding Claim 9, Ferren further discloses the diameter (i.e. width) of the speaker enclosure is six inches (Column 4, lines 6-7) and the speakers can be disposed within a height eight feet (Column 4, lines 15-18) producing a height to width ratio of (8 feet*12inches)/6inches = 16 which is greater than 11.

Regarding Claim 21, Ferren further discloses a plurality of first loudspeaker arrays in a room (Ferren discloses auditorium) (Column 1, line 13) having a performance area contiguous with a listening area (Figure 1), said plurality of loudspeaker arrays (arrays 10, 12, 14, and 16) located at a corresponding plurality of spaced locations in said performance are each facing said listening area (area 18) with the associated straight line substantially vertically oriented, and a corresponding plurality of electroacoustical transducers (Ferren discloses announcer's microphone, Column 1, line 55) located in said performance area at a corresponding plurality of spaced locations electrically coupled to respective ones of said loudspeaker arrays and located between the associated loudspeaker array and said listening area (Ferren discloses announcer in vicinity of the loudspeakers (i.e. between loudspeaker array and listening area) (Column 1, lines 51-55).

Regarding Claim 22, Ferren further discloses a room having a performance area

(Figure 1) contiguous with a listening area (area 18) and a plurality of loudspeakers (arrays 10, 120,14, and 16) with corresponding electroacoustical transducers including, placing said plurality of loudspeaker arrays at a corresponding plurality of spaced locations in said performance are with each facing said listening area (18) with the associated straight line substantially vertically oriented, placing said plurality of electroacoustical transducers in said performance area at a corresponding plurality of spaced locations between an associated loudspeaker array and said listening area, and electrically coupling each of said electroacoustical transducers to an associated loudspeaker array (Ferren discloses announcer with microphone (i.e. electrical transducer) in vicinity of loudspeaker (i.e. between loudspeaker and listening area) (Column 1, lines 51-55) which outputs sound from the microphone. Pp. 2-13.

This ground of rejection is respectfully traversed. We stand on the authority set forth on pages eight and nine of the response filed 15 March 2005. Furthermore, it is impossible to combine the references to meet the limitations of the rejected claims. The Examiner recognizes the primary reference fails to disclose the limitation of at least six drivers having a diameter less than three inches operative over a predetermined frequency range of at least six octaves and cannot point to a disclosure of structure operative over at least six octaves in the secondary reference.

Column 4, lines 21-37 of the secondary reference reads as follows:

FIGS. **4*a*** and **4*b*** show a detailed view front and side respectively of right speaker system **15*b***. In this embodiment, six small speakers **50** are mounted in the front face **51** of the speaker system, the speakers should be very small, approximately 1–2" in diameter. There are several reasons why a small speaker size is advantageous in the current invention. First, when mounted for stereo sound on the multimedia display monitor **14**, the miniature speakers in the side panels **15*a***, **15*b*** minimize the added width required by the multimedia display on a desktop. Second, a speaker size less than half a wavelength eliminates standing waves across the speaker cone, producing better phase linearity and smoother frequency response. The speaker response is less ragged, even though it may roll off at lower frequencies. Roll offs are easy to correct; ragged response is nearly impossible to correct. Third, a speaker will give more uniform dispersion for all frequencies for which the wavelength is greater than about twice the speaker size. Uniform dispersion means

"Moreover, we observe that even if these references were combined in the manner proposed by the examiner, that which is set forth in appellant's claims . . . would not result." *Ex parte Bogar*, slip op. p.7 (BPA&I Appeal No. 87-2462, October 27, 1989). "Even if we were to agree with the examiner that it would have been obvious to combine the reference teachings in the manner proposed, the resulting package still would not comprise zipper closure material that terminates short of the end of the one edge of the product containing area, as now claimed." *Ex parte Schwarz*, slip op. p.5 (BPA&I Appeal No. 92-2629 October 28, 1992). "Although we find nothing before us indicating why it would be desired to combine the references in the manner urged by the examiner, it is clear to us that such a modification by itself would not result in that which is set forth in the claims." *Ex Parte Kusko*, 215 U.S.P.Q. 972, 974 (BPA&I 1981).

That it is impossible to combine the references to meet the limitations of the rejected claims is reason enough for withdrawing the rejection of them.

What the Examiner is doing is using the claims being rejected as a blueprint or template for attempting to pick portions of the references as a basis for rejecting the claims. This approach is improper.

The alleged teaching is found, not in the references but in the claims being rejected. It is error to reconstruct the claimed invention from the prior art by using the rejected claim as a "blueprint." *Interconnect Planning Corp. v. Feil,* 227 U.S.P.Q. 543, 548 (Fed. Cir. 1985).

> Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.[15] This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."[16] *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1784 (Fed. Cir. 1992).

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[15] *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). See also *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

[16] *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600

Furthermore, the accompanying declaration supports patentability. The commercial success attributed to the claims overcomes any possible prima facie case of obviousness, a case that is not supported by the references. The accompanying declaration evidence further confirms that the invention disclosed and claimed in this application meets the conditions for patentability. While the prior art here fails to establish a prima facie case of nonobviousness, this evidence of commercial success would overcome any prima facie case in this application. See *Simmons Fastener Corp. v. Illinois Tool Works Inc.*, 222 U.S.P.Q. 744 (Fed. Cir. 1984), *cert. denied*, 471 U.S. 1065 (1985). Commercial success is a strong factor favoring nonobviousness *Akzio N.V. v. U.S. Int'l Trade Comm'n*, 1 U.S.P.Q. 2d 1241 (Fed. Cir. 1986), *cert. denied*, 477 U.S. 905 (1986).

We respectfully requested that if this ground of rejection were repeated, the Examiner quote verbatim the language in the references regarded as corresponding to each limitation in each rejected claim, and quote verbatim the language in the references regarded as suggesting the desirability of combining what is there disclosed to meet the limitations of the rejected claims. The Examiner did not and cannot comply with this request. If this ground of rejection is again repeated, the Examiner is again respectfully requested to quote verbatim the language in the references regarded as corresponding to each limitation in each rejected claim, and quote verbatim the language in the references regarded as suggesting the desirability of combining what is there disclosed to meet the limitations of the rejected claims.

Furthermore, the Examiner has not even mentioned the authorities upon which we rely let alone distinguish them. The Examiner is required to follow these authorities.

> We take this occasion to explain what precedents are considered binding in proceedings in the Patent and Trademark Office (PTO). Where the Court of Appeals for the Federal Circuit has addressed a point of law in a published opinion, the Federal Circuit's decision is controlling. Similarly controlling are decisions considered to be binding precedent by the Federal Circuit, i.e., decisions of the former Court of Claims and the former Court of Customs and Patent Appeals, as well as the former Customs Court. See *South Corp. v. United States*, 690 F.2d 1368, 215 USPQ 657 (Fed. Cir. 1982)(in banc); *Bar Zell Expediters, Inc. v. United States*, 698 F.2d 1210, 1211 n. 4 (Fed. Cir. 1983). In those relatively rare cases where the Federal Circuit has not addressed an issue, but there is "authorized published" Board precedent, that published Board precedent is binding on panels of the Board and Examiners in the Patent Examining Corps. *Ex parte Holt*, 19 U.S.P.Q. 2d 1211, 1214 (BPA&I 1991).

The office action states:

> Regarding Claim 10, applicants argue, page 10 of 12, that the tertiary reference does not suggest the system of claim 2 constructed and arranged to transduce acoustical energy substantially at least seven watts of electrical energy per square inch of radiating surface. This is not persuasive as Humphrey discloses a commonly designed amplifier producing 100 watts per channel (Col. 2, lines 20-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a common amplifier as disclosed by Humphrey to drive a speaker system.
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> ....
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> Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferren in view of Edgar as applied to claim 2 above in further view of Humphrey (US Patent 4,797,633). Ferren/Edgar discloses a loudspeakers system as stated apropos of claim 2 above including power amplifiers (Ferren, Figure 6; amplifiers 62L, 64L, 62R, and 63R). Ferren does not disclose transducing at least seven watts of electrical energy per square inch of radiating surface. Edgar further discloses that the total acoustic power available from the system is proportional to the square of the total speaker surface area and it is desirable to fit as many speakers into the line as will fit. Ten one-inch speakers as stated in the rejection of claim 2 will produce a total radiating surface area of approximately (10 speakers x (0.5 inch radius)2 x 3.14) = 7.85 square inches. Humphrey discloses a commonly designed amplifier (Col. 2, lines 20-22) rated at 100 watts per channel which will produce (100 Watts / 7.85 inches2) = approximately 12.7 Watts/in2 which is greater than 7 watts/in2. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for a common amplifier to produce at least 7 watts of electrical energy per square inch of radiating surface by using a common speaker amplifier as disclosed by Humphrey (Col. 2, lines 20-22) to produce a greater audio power output to the listener. Pp. 2,13-14.

This ground of rejection is respectfully traversed.

Claim 10 is dependent upon and includes all the limitations of claim 2, which we have shown above is patentable over the primary and secondary references so that further discussion of the Humphrey tertiary reference is submitted to be unnecessary.

In view of the authorities of record, the accompanying declaration and the inability of the prior art alone or in combination, to anticipate suggest or make obvious the subject matter as a whole of the invention disclosed and claimed in this application all the claims are submitted to be in a condition for allowance and notice thereof is respectfully requested. Should the Examiner believe the application is not in a condition for allowance, he is respectfully requested to

telephone the undersigned attorney at 617-521-7014 to discuss the what additional steps he believes are necessary to place the application in a condition for allowance.

Enclosed is a check in the amount of $450 for a two-month extension of time. Please apply any other charges or credits to deposit account 06-1050, Order No. 02103-393001.

Respectfully submitted,
FISH & RICHARDSON P.C.

Date: NOV 18 2005

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